

1. A tuner for extracting specific signals from a set of signals on a carrier wherein the set of signals have at least one of a set of measurable characteristics, said tuner comprising:

means for determining from a measurement of the measurable characteristics which are present in a particular set of signals input to said tuner certain desirable tuner operating characteristics; and

means operable under control of said determining means for changing the operating characteristics of said tuner.

2. The system set forth in claim 1 wherein said operating characteristics changing means includes:

means for changing power consumption levels with respect to certain of said tuner components.

3. The invention set forth in claim 1 wherein said operating characteristics changing means includes:

means for determining optimum operating characteristics for said tuner depending upon said determined operating characteristics.

4. The system set forth in claim 3 wherein said operating characteristics changing means includes:

means for changing power levels with respect to certain of said tuner components, said power levels changed to the determined optimum level.

5. The invention set forth in claim 1 wherein said tuner is constructed on a single substrate.

6. The method of operating a tuner, said method comprising the steps of:  
assessing from time to time the incoming signal environment, wherein an assessment of said incoming signal environment is a function of the signals then being processed by said tuner;

based upon said assessed incoming signal environment selecting an operating level for said tuner; and

setting the operation of said tuner consistent with said selected operating level.

7. The method of claim 6 wherein said selecting step includes the step of selecting an optimum power level for said tuner.

8. The method of claim 7 wherein said last-mentioned step includes selecting optimum power levels for certain components of said tuner.

9. The method of operating a tuner, said method comprising the steps of determining optimal tuner operating characteristics from knowledge of the signals being processed by the tuner; and adjusting the tuner operating characteristic in accordance with said determining step.

10. The method of claim 9 wherein said determining step includes the step of: taking signal measurements of the signal being processed by the tuner.

11. The method of claim 10 wherein said signal measurement step includes the step of:  
determining total power across all channels.

12. The method of claim 9 wherein said determining step includes the step of: receiving information from an external source.

13. The method of claim 9 wherein said determining step includes the step of: monitoring the RF input and the inband receive signal strength.

14. The method set forth in claim 9 wherein said adjusting step includes the step of:  
adjusting power consumption of certain components within said tuner.

15. The method set forth in claim 14 wherein said last mentioned step includes the step of:  
controlling current levels of said certain components.

16. The method set forth in claim 9 wherein said determining step includes using the channel sweep and static methods at different times.

17. The method set forth in claim 14 wherein said adjusting step includes the step of:

adjusting the number of components that are active at any particular time.

18. A tuner comprising a circuit for determining tuner operating characteristics from knowledge of the signals being processed by the tuner; and  
at least one circuit for adjusting the operating characteristic in accordance with said determining circuit.

19. The tuner of claim 18 wherein said determining circuit includes a circuit for taking signal measurements of the signal being processed by the tuner.

20. The tuner of claim 19 wherein said signal measurement circuit includes a circuit for determining total power across all channels.

21. The tuner of claim 18 wherein said determining circuit includes a circuit for reviewing information from an external source.

22. The tuner of claim 18 wherein said determining circuit includes a circuit for monitoring the RF input and the inband receive signal strength.

23. The tuner of claim 18 wherein said adjusting circuit adjusts the power consumption of certain components within said tuner.

24. The tuner of claim 18 wherein said adjusting circuit adjusts the current levels of certain components within said tuner.

25. The tuner of claim 18 wherein said determining circuit includes channel sweep circuitry and static determination which circuitry operable at different times.

26. A tuner comprising circuitry for:  
determining desired operating characteristics of certain tuner components from knowledge of the signals being processed by the tuner; and  
circuitry operable in cooperation with said determining circuitry for adjusting the operating characteristics of said certain components.

27. The tuner of claim 26 wherein said determining circuit includes circuitry for taking signal measurements of the signal being processed by the tuner.

28. The tuner of claim 26 wherein said adjusting circuits adjust power consumption of said certain components.

29. The tuner of claim 28 wherein said adjusting circuitry controls current levels of said certain components.

30. The tuner of claim 26 wherein said adjusting circuitry adds or subtracts said certain components into or out of said tuner.

31. The tuner of claim 26 wherein said determining circuit includes channel sweep circuitry and static determination circuitry operable at different times.

32. A tuner operable for extracting certain signals from a set of signals, said tuner operable with at least two different signal sets, each signal set having a different operation characteristic, said tuner including:

determination circuitry for selecting which signal set is being processed at a point in time; and

adjustment circuitry operable in cooperation with said determination circuitry for changing power levels to certain tuner components in accordance with the signal set then being processed.

33. The tuner of claim 32 wherein said adjustment circuitry is operable in cooperation with said determination circuitry for changing the component mix of said tuner.

34. The tuner of claim 32 wherein said determination circuitry includes channel sweep circuitry.

35. The tuner of claim 32 wherein said determination circuitry includes static determination circuitry.

36. The tuner of claim 32 wherein said determination circuitry includes both channel sweep circuitry and static determination circuitry.

37. The tuner of claim 36 wherein said channel sweep circuitry and said static determination circuitry are operable at different times.

38. A system for processing signals, said system comprising:  
means for providing input signal environmental assessment, wherein an input signal environment assessed by said input signal environmental assessment means comprises a set of signals;

means for determining a power level from input signal environmental assessment information, wherein said power level determining means is coupled to said input signal environmental assessment means for communication of said input signal environmental assessment information;

means for providing power control in accordance with determined power level information, wherein said power control means is coupled to said power level determining means for communication of said determined power level information; and

means for tuning a selected signal from said set of signals, wherein said tuning means is coupled to said power control means for power control of said tuning means by said power control means.

39. The system of claim 38, wherein said input signal environmental assessment means determines a signal density with respect to said set of input signals.

40. The system of claim 38, wherein said input signal environmental assessment means comprises:

means for sweeping signals of said set of signals and acquiring signal level information with respect thereto.

41. The system of claim 38, wherein said input signal environmental assessment means comprises:

means for acquiring a total signal power level associated with said set of signals.

42. The system of claim 38, wherein said power level determining means utilizes acquired knowledge of the environment to determine a correct amount of power reduction to be applied to said tuner.

43. The system of claim 38, wherein said power level determining means utilizes a third order input intercept of said tuner in providing said determined power level information.

44. The system of claim 38, wherein said power control means comprises: means for changing current utilized by components of said tuner.

45. The system of claim 38, wherein said power control means comprises: means for selecting mixer cores from a plurality of mixer cores of said tuner for use in processing a signal.

46. A method for processing signals, said method comprising:  
providing input signal environmental assessment, wherein an input signal environment assessed comprises a set of signals;  
determining a power level from input signal environmental assessment information obtained from said input signal environmental assessment;  
providing power control in accordance with determined power level information obtained from said determining a power level from said input signal environmental assessment information; and  
tuning a selected signal from said set of signals, wherein a power level of a tuner providing said tuning is controlled by said power control provided in accordance with said determined power level information.

47. The method of claim 46, wherein said input signal environmental assessment is determined at least in part using a signal density with respect to said set of input signals.

48. The method of claim 46, wherein said input signal environmental assessment comprises:  
sweeping signals of said set of signals and acquiring signal level information with respect thereto.

49. The method of claim 46, wherein said input signal environmental assessment comprises:  
acquiring a total signal power level associated with said set of signals.

50. The method of claim 46, wherein said determining said power level comprises:

acquiring knowledge of the signal environment to determine a correct amount of power reduction to be applied to said tuner.

51. The method of claim 46, wherein said determining said power level comprises:

utilizing information with respect to a third order input intercept of said tuner in providing said determined power level information.

52. The method of claim 46, wherein said determining said power control comprises:

changing current utilized by components of said tuner.

53. The method of claim 46, wherein said determining said power control comprises:

selecting mixer cores from a plurality of mixer cores of said tuner for use in processing a signal.